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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/729,708	LIEBERMAN, BRUCE LOUIS	
	Examiner	Art Unit	
	Joshua Smith	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/05/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8, 9, 11-20, 22-29, and 31-33 rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The "computer readable media" as defined in paragraph [0037] of applicant's disclosure includes "modulated data signal such as a carrier wave" and "wireless media such as acoustic, RF, infrared and other wireless media." Claim 9 explicitly states "modulated data signal carrying computer executable instructions".

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 7, 8, 10, and 31 rejected under 35 U.S.C. 102(b) as being anticipated by Bellaton et al. (Patent No.: US 6,473,425 B1), hereafter referred to as Bellaton.

As for Claim 1, Bellaton shows in lines 26-27, column 4, and FIG. 4, Sheet 4 of 11, "a schematic representation of the exchange of packets" (substantively the same as "downloading information form a second device to a first device" in the instant invention).

Bellaton shows in lines 60-61, column 1, and FIG. 4, Sheet 4 of 11, "A sequence of packets sent from one machine to another" (see items P1, P2, and P3), where a sliding window W (see line 28, column 4, and item W, FIG.4, Sheet 4 of 11) determines that 3 packet packets are to be sent since its "a sliding window of size 3" (see line 27-28, column 4) (substantively the same as "sending a first specified number of identifiably ordered data packets from the second device to the first device" in the instant invention).

Bellaton shows in line 38, column 3, and FIG. 4, Sheet 4 of 11, "the acknowledgment A1 is received" while the packet P3 has been transmitted, where item A1 shows that packet receiver has received item P1 packet (has received one packet), while the transmission of item P3 packet shows that packet transmitter has transmitted three packets, showing that the number of acknowledged packets (one packet received) is less then the specific number of packets transmitted (three packets transmitted) (substantively the same as "receiving a first acknowledgment from said first device that a second specified number of identifiably ordered data packets was received by said first device, wherein said second number of said identifiably ordered data packets is less than said first specified number of identifiably ordered data packets" in the instant invention).

Bellaton shows in lines 12-14, column 4, and FIG. 4, Sheet 4 of 11, "On receipt of the acknowledgement for packet 1, packet 4 is then sent" since the sliding window has now slid beyond the acknowledged item packet P1 and now item packet P4 is within the 3-packet transmission window length (see FIG. 4, Sheet 4 of 11) (substantively the same as "sending additional of said identifiably ordered data packets from said second device to said first device, up to said first specified number of identifiably ordered data packets beyond the last of said identifiably ordered data packets acknowledged by said first device" in the instant invention).

As for Claim 2, Bellaton shows in lines 14-15, column 4, and FIG. 4, Sheet 4 of 11, "At this stage packet 5 cannot be sent until an acknowledgement has been received from packet 2", but after this second acknowledgment (see item A2) is received, the sliding window item W will slide beyond packet item P2 and will include P5 for transmission (see FIG. 4, Sheet 4 of 11), and this process continues until packet item P6 is finally transmitted (substantively the same as "receiving a second acknowledgment from said first device that said second specified number of said identifiably ordered data packets was again received by said first device" and "repeating said sending of additional of said identifiably ordered data packets and said acknowledging again by said first device to said second device until the information is downloaded" in the instant invention).

As for Claim 7, as discussed with respect to Claim 1, Bellaton shows in lines 60-61, column 1, and FIG. 4, Sheet 4 of 11, "A sequence of packets" (see items P1, P2, P3, P4, P5, P6) (substantively the same as "said identifiably ordered data packets are sequentially identified data packets" in the instant invention).

As for Claim 8, Bellaton teaches in lines 10-11, column 7, "a software dispatch mechanism on a storage medium" (substantively the same as "A computer readable medium comprising computer executable instructions for carrying out the method of claim 1" in the instant invention).

As for Claim 10, Bellaton shows in lines 26-45, column 1, and FIG. 2 and FIG. 2A, Sheet 1 of 11, "the configuration of a station for a router 10 or source or destination" (substantively the same as "A computing device" of instant invention), with "computer 20 comprising a system unit 22, optionally with a display 38, keyboard 40 and other input devices 42", and "FIG. 2A is a schematic block representation of aspects of the contents of the system unit 22. As illustrated in FIG. 2A, the system unit includes a processor 28, memory 30, disk drives 24 and 26, and a communications adaptor 32 for connection to one or more telecommunications lines 34 for connection to the telecommunications network 16/18. As illustrated in FIG. 2A, the components of the system unit are connected via a bus arrangement 36", and is substantively the same as corresponding structure of computing device and server of applicant, since disclosure of applicant explicitly states "Fig. 10 thus illustrates an example of a suitable computing

device 100 in which the invention may be implemented, although as made clear above, the computing system environment 100 is only one example of a suitable computing environment and is not intended to suggest any limitation as to the scope of use or functionality of the invention. Neither should the computing environment 100 be interpreted as having any dependency or requirement relating to any one or combination of components illustrated in the exemplary operating environment 100. Indeed, one likely use of the data download techniques of this invention is for downloading operating systems to reduced cost devices, which may omit some of the components in Fig. 10 to reduce costs. The "server" of Fig. 3, on the other hand, is more likely to comprise the elements of a computing device as shown in Fig. 10 " (emphasis added by examiner). Paragraphs [0035] to [0044] of applicant's disclosure also explicitly state "not limited to", "not limitation", "may also", "may operate", "may be", concerning disclosed components.

Claim 31 appears to contain limitations in Claims 1, 8, and 10, addressed above.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 3-6, 11-29, 32, and 33 rejected under 35 U.S.C. 103(a) as being unpatentable over Bellaton et al. (Patent No.: US 6,473,425 B1) in view of Woundy (Patent Number: 6,009,103), hereafter referred to as Bellaton and Woundy, respectively.

As for Claim 3, Bellaton does not teach of a discovery packet to request a data download connection. However, in the same field of endeavor, Woundy teaches in lines 55-57, column 5, "when a user terminal wants to find a candidate DHCP server, the user terminal sends out a Discover message" (substantively the same as "receiving by said second device a discovery packet which informs said second device that said first device requests a data download" in the instant invention). It would have been obvious to one skilled in the art at the time of the invention to combine the mechanism of Bellaton with the method of Woundy since the mechanism of Bellaton may operate in a network involving a DHCP server and a common network database formed from a LDAP directory and the method of Woundy makes resource allocation more efficient in such a system.

As for Claim 4, Bellaton does not teach of an offer packet. However, in the same field of endeavor, Woundy teaches in lines 57-58, column 5, a "DHCP server is programmed to respond to a Discover message", and, in lines 24-25, column 6, "a DHCP Offer message is sent to the user terminal" (substantively the same as "transmitting an offer packet to inform said first device that said second device is prepared to download data" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 5, Bellaton does not teach of a start packet. However, in the same field of endeavor, Woundy teaches in lines 64-65, column 5, "a user sends a Request message to select a particular Offer" (substantively the same as "receiving a start packet from the first device establishing a connection between said second and first device for said second device to begin downloading data to said first device" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 6, Bellaton does not teach of a stop packet when information download is complete. However, in the same field of endeavor, Woundy teaches in lines 61-62, column 8, "a user can also send a Release message to terminate an IP address reservation prematurely" (substantively the same as "receiving by said second device a stop packet which informs said second device that the information is

downloaded" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 11, the references as applied to Claims 1, 5, and 8 teach all the limitations except comparing the number of data packets transmitted to the sum of data packets acknowledged and a predetermined number. Bellaton teaches in lines 11-17, column 4, and FIG. 4, Sheet 4 of 11, shows that the window item W is effectively calculating and limiting the packets that are transmitted by positioning itself immediately after the packets that have been acknowledged but limiting the packets that are transmitted through its predetermined upper limit. (substantively the same as "said number is determined by comparing a number of data packets transmitted to the first device to the sum of the number of identifiably ordered data packets acknowledged by the first device based upon at least one acknowledgment received by the second device and a second predetermined number of data packets" in the instant invention).

As for Claim 12, the references as applied to Claim 8 teach the "a computer readable medium" limitation. Bellaton further shows in lines 9-14, column 4, and FIG. 4, Sheet 4 of 17, "all of the first three packets can be transmitted without waiting for an acknowledgement. However, packet 4 can only be transmitted when an acknowledgement has been received for packet 1. On receipt of the acknowledgement for packet 1, packet 4 is then sent. At this stage packet 5 cannot be sent until an acknowledgement has been received from packet 2. It can be seen therefore that the

window effectively slides along the sequence of packets as acknowledgements are received", as a result, packets can only be sent if their sequence number is more than the last acknowledged packet but not above the sum of the total acknowledged packets and the window length (substantively the same as "said sequentially transmitting includes transmitting a data packet if the number of data packets transmitted to the first device is less than the sum of the number of identifiably ordered data packets acknowledged by the first device and the predetermined second number of data packets" in the instant invention).

Claim 13 appears to contain limitations in Claim 12, addressed above.

As for Claim 14, the references as applied to Claim 8 teach the "a computer readable medium" limitation. Bellaton further shows in lines 9-14, column 4, and FIG. 4, Sheet 4 of 17, the sum of the total acknowledged packets and the window length is equal to or larger than the number of packets transmitted (substantively the same as "said second predetermined number is larger than said first predetermined number" in the instant invention).

Claim 15 appears to contain limitations in Claims 7 and 8, addressed above.

Claim 16 appears to contain limitations in Claims 3 and 8, addressed above.

As for Claim 17, the references as applied to Claims 4 and 8 teach all the limitations except offer packet includes data to show sending device is prepared for download. Woundy further teaches in line 26, column 6, "The Offer message allocates the reserved IP address" to the user terminal, implicitly showing that the DHCP server, through this allocating of resources, communicates to the user terminal that the DHCP server is ready for data transfer (substantively the same as "said offer packet includes data capable of informing the first device that said second device is prepared to download" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 18, the references as applied to Claims 5 and 8 teach all the limitations except start packet includes data to show sending device is prepared for download. Woundy further teaches in lines 1-2, column 7, "Request message will contain a DHCP server identifier option when selecting an Offer", implicitly showing that the user terminal will inform a DHCP server that it is ready for data transfer by selecting the server using the identifier in the Request message (substantively the same as "start packet includes data that informs said second device to begin downloading said information to said first device" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 19, the references as applied to Claims 6 and 8 teach all the limitations except stop packet includes data to show sending device has finished download. Woundy further teaches in lines 66-67, column 8, and line 1, column 9, that for a Release message, "A DHCP server response is similar to the response to a Request message without a server identifier", and "shown in FIG. 4, at block 300 the DHCP server is programmed to respond a Request message without a server identifier", and FIG. 4 shows that the server will eventually exit due to the absence of a server ID, implicitly teaching that the content of the Release message sent by the user terminal will cause the server to exit from further communications since it indicates a request to terminate any data transfer (substantively the same as "stop packet includes data that informs said second device that said first device has received the last packet of said information" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

As for Claim 20, the references as applied to Claims 11 and 19 teach all the limitations in the instant invention except disestablishing said connection upon receiving the stop packet. As discussed above with respect to Claim 19, Woundy further teaches in lines 66-67, column 8, and line 1, column 9, that for a Release message, "A DHCP server response is similar to the response to a Request message without a server identifier", and "shown in FIG. 4, at block 300 the DHCP server is programmed to respond a Request message without a server identifier", and FIG. 4 shows that the server will eventually exit due to the absence of a server ID, showing that the DHCP

server will remove the appropriate link when it receives a Release message from a user terminal (substantively the same as "disestablishing said connection upon receiving the stop packet" in the instant invention). The motivation to combine the invention of Woundy with the invention of Bellaton is discussed above with respect to Claim 3.

Claim 21 appears to contain limitations in Claims 8 and 10, addressed above.

Claim 22 appears to contain limitations in Claims 1, 3, 5, 6, and 8 addressed above.

Claim 23 appears to contain limitations in Claims 7 and 8, addressed above.

Claim 24 appears to contain limitations in Claims 3 and 8, addressed above.

Claim 25 appears to contain limitations in Claims 8 and 17, addressed above.

Claim 26 appears to contain limitations in Claims 8 and 18, addressed above.

Claim 27 appears to contain limitations in Claims 8 and 19, addressed above.

Claim 28 appears to contain limitations in Claims 8 and 20, addressed above.

Claim 29 appears to contain limitations in Claims 8 and 10, addressed above.

Claim 32 appears to contain limitations in Claims 8, 10, and 11, addressed above.

Claim 33 appears to contain limitations in Claims 10 and 22, addressed above.

Claims 9 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Bellaton in view of Gubbi et al. (Patent No.: US 6,574,668 B1), hereafter referred to as Gubbi.

As for Claim 9, Bellaton does not teach of computer executable instructions carried on a modulated data signal. However, in the same field of endeavor, Gubbi teaches in lines 61-62, column 5, "a modulated signal embodying one or more computer-readable symbols" (substantively the same as "A modulated data signal carrying computer executable instructions for performing the method of claim 1" in the instant invention). It would have been obvious to one skilled in the art at the time of the invention to adopt the retransmission scheme of Gubbi into the mechanism of Bellaton since the mechanism of Bellaton only retransmits a packet after a timer expires, whereas the scheme of Gubbi will allow the receiver to request a packet retransmission through a NAK, which may be quicker than waiting for a timer expiration.

As for Claim 30, Bellaton as applied to Claims 1, 2, and 10 teaches all the limitations in the instant invention except receiving a message that a packet among multiple packets was not received or re-sending a packet that was not received. However, in the same field of endeavor, Gubbi shows in lines 10-25, column 7, and FIG. 3, Sheet 1 of 3, a "continuous ARQ scheme with a selective repeat function", where, among a group of packets (see items [1], [2], [3], [4]), packet item [3] is not received, resulting in a negative acknowledgement item 54 item with [NAK-3] being sent, causing packet item [3] to be subsequently retransmitted (substantively the same as "receiving a message that a packet among said multiple packets of data was not received" and "re-sending said packet among said multiple packets of data that was not received" in the instant invention). The motivation to combine the invention of Gubbi with the invention of Bellaton is discussed above with respect to Claim 9.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Bennett et al. (Patent No.: US 6,775,707 B1) involves a queue storing transmitted messages while waiting for their acknowledgement. Block (Patent No.: US 7,185,099 B1) shows a node acknowledging multiple received messages with a single acknowledge message. Larsson (US 2003/0035438 A1) involves a sliding window protocol and where multiple packets are acknowledged with a single acknowledgment. Neale et al. (Pub. No.: US 2003/0131079 A1) provides a technique where a single acknowledgement is used to acknowledge multiple packets. Davis et al.

(Pub. No.: US 2004/0207723 A1) shows a computing-system environment for use with a network. Schieder et al. (Pub. No.: US 2001/0026546 A1) shows packets with link-maintenance indicators.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Smith whose telephone number is 571-270-1826. The examiner can normally be reached on Monday through Friday, 7:30 AM to 5:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Garber can be reached on 571-272-2194. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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